



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,160	02/24/2004	Tsuncaki Kondoh	249206US3	8288
22850 7590 04/23/2007 OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER ZACHARIA, RAMSEY E	
			ART UNIT 1773	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	04/23/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/23/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary

Application No.

10/784,160

Applicant(s)

KONDOH ET AL.

Examiner

Ramsey Zacharia

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-10 and 12-18 is/are pending in the application.
- 4a) Of the above claim(s) 10 and 12-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/07/06; 3/19/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Information Disclosure Statement

2. The first reference in the information disclosure statements filed 07 December 2006 and 19 March 2007 have been lined through because they are the present application.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1 and 3-9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a new matter rejection. There does not appear to be any support in the disclosure as originally filed for the limitation that the elastic layer does not include any oxidized material. While it is noted that page 10, lines 5-13 of the specification describe a fixing member without having defects caused by cracks in the separation layer generated by oxidation and deterioration of the heat resistance rubber, the language inserted into claim one prohibits the

presence of any oxidized material (e.g. metal oxide filler). The concept of an elastic layer free from any oxidized material does not appear to be supported by the originally filed disclosure.

Claim Rejections - 35 USC § 103

5. Claims 1, 3, 4 and 9 are rejected under 35 U.S.C. 103(a) as obvious over Fukunaga et al. (US 5,819,646) in view of Kobaru et al. (US 2001/0026717 A1) as evidenced by Hobson et al. (US 5,744,241).

Fukunaga et al. teach a pressing roll comprising a core, an elastic layer, and fluorocarbon layer (column 2, lines 35-45). The fluorocarbon layer may contain various fillers such as metal (column 4, lines 2-5). In the embodiment of Example 1, the elastic layer comprised a silicone rubber and the fluorocarbon layer comprised FURON resin manufactured by Bunnell Plastics Division, a PFA resin (column 6, lines 18-41). Hobson et al. demonstrate that the FURON from Bunnell Plastics Division has an axial tensile strength of 6258 psi (column 14, lines 32-56), which corresponds to about 43 MPa.

Regarding the limitation that the elastic layer does not include any oxidized material and that the separation layer does not include any cracks, these limitations appear to be met for the following reasons. Fukunaga et al. use a preformed PFA film as the resin layer and there are no indications that any cracks are present in the film, nor do there appear to be any steps in the manufacturing process that would inherently result in the formation of cracks. The elastic layer of Fukunaga et al. is formed by curing a silicon rubber at 150 °C, a temperature significantly lower than the 200 °C curing regimen used by the applicants. Finally, Table 1 in column 4 demonstrates that the roll of Fukunaga et al. exhibits a high degree of toner fixation; if there were

Art Unit: 1773

cracks in the resin layer or oxidation of the elastic layer, one would expect to see image fixing defects (as per page 10, lines 5-13 of the instant specification).

Fukunaga et al. do not teach that the core of the pressing roll surrounds an aperture configured to receive a heater.

Kobaru et al. is directed to a fixing apparatus for use in an image forming apparatus (paragraph 0002). The device comprises a pressurizing roller comprising a core, a silicone rubber layer, and an outer fluororesin layer wherein the core is hollow and configured to receive a heater (paragraph 0044). By providing a heater within the pressurizing roller, adhesion of toner to the roller can be prevented (paragraph 0061).

One skilled in the art would be motivated to provide a heater within the pressure roll of Fukunaga et al. to prevent the adhesion of toner to the pressure roll.

6. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukunaga et al. (US 5,819,646) in view of Kobaru et al. (US 2001/0026717 A1) as applied to claim 4 above, and further in view of Suzuki et al. (US 4,796,046).

Fukunaga et al. taken in view of Kobaru et al. teach all the limitations of claims 5 and 6, as outlined above, except for the presence of 1-5 mass% of carbon filler. However, Fukunaga et al. do teach that their fluorocarbon layer may be made electrically conductive (column 3, line 67-column 4, line 1).

Suzuki et al. teach that adding 1-10 wt% of a filler, such as carbon black, to a fluoropolymer layer of a fuser members results in an electrically conductive layer without impairing the releasability of the coating layer to toner images. (column 6, lines 7-19).

Art Unit: 1773

One skilled in the art would be motivated to make the fluorocarbon layer of Fukunaga et al. electrically conductive by adding 1-10 wt% of carbon black so that the resulting layer will be electrically conductive without impairing its releasability to toner images.

7. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukunaga et al. (US 5,819,646) in view of Kobaru et al. (US 2001/0026717 A1) as applied to claim 1 above, and further in view of Ream et al. (US 6,284,373).

Fukunaga et al. taken in view of Kobaru et al. teach all the limitations of claims 7 and 8, as outlined above, except for the material for the core of the fixing member.

Ream et al. disclose that cores of fusing members are typically metal rolls or polyimide belts (column 1, lines 55-67). Suitable metals include aluminum, stainless steel, and copper alloys (column 4, lines 9-13).

Ream et al. disclose that polyimide belts and aluminum or stainless steel rolls are known in the art as suitable cores for fuser members. Therefore, it would be obvious to one skilled in the art to use one of these known cores as the core in the fixing member of Fukunaga et al. because the selection of a known material based on its suitability for its intended use supports a *prima facie* obviousness determination. See MPEP 2144.07.

Response to Arguments

8. Applicant's arguments filed 16 February 2007 have been fully considered but they are not persuasive.

Art Unit: 1773

The applicants argue that no part of Fukunaga et al. describe either that their elastic layer does not include any oxidized material or that their resin layer does not include any cracks.

This is not persuasive because the applicants have demonstrated neither that the elastic layer of Fukunaga et al. contains oxidized material nor that the resin layer contains cracks. The absence of evidence is not the evidence of absence.

In the embodiment of Example 1, a preformed PFA film is used as the resin layer and there are no indications that any cracks are present in the film, nor do there appear to be any steps in the manufacturing process that would inherently result in the formation of cracks. Moreover, the elastic layer is formed by curing a silicon rubber at 150 °C, a temperature significantly lower than the 200 °C curing regimen used by the applicants. Finally, Table 1 in column 4 demonstrates that the roll of Fukunaga et al. exhibits a high degree of toner fixation; if there were cracks in the resin layer or oxidation of the elastic layer, one would expect to see image fixing defects (as per page 10, lines 5-13 of the instant specification).

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

Art Unit: 1773


will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramsey Zacharia whose telephone number is (571) 272-1518.

The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney, can be reached at (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ramsey Zacharia
Primary Examiner
Tech Center 1700